

REMARKS

To fully complete the record, applicants provide an English translation of the JP '335 document previously cited and discussed. This document teaches the concept of applying an MeX layer, where Me comprises titanium and a further metal selected from the group VIa, namely zirconium, hafnium, the Group Va comprising V, Nb, Ta, the group Via, i.e., Cr, Mo, W and further, aluminum. The tool body is of high-speed steel or cemented carbide. The Q_I value according to the value I_a referred to exceeds 1.5, whereby the critical load value increases and adhesion improves. Table 1 of the document discloses a specific example (No. 7) of such coating, wherein Me is titanium and aluminum and the peak intensity ratio Q_I is exceeding 1.5, namely is 2.3. The document also teaches applying this coating to inserts of cemented carbide body material.

The present invention has discovered that the use of $Q_I \geq 5$ produces surprising results in terms of wear resistance.

Applicants' attached sketch relates the linearly scaled Q_I axis to the attainable cutting distances as in Tables 1 and 2 of the present application. The triangular points plot the results of Table 1. A significant increase of wear resistance occurs above a Q_I value of 5 in a nonlinear, substantially progressive manner which would not be expected from the teachings of JP '335.

Table 2 compares layers where an outermost layer is provided. Although the example in Table 2 additionally provides for an outermost layer and an intermediate layer, a significant step-like increase of wear resistance appears to occur above a Q_I value at or in excess of 5.

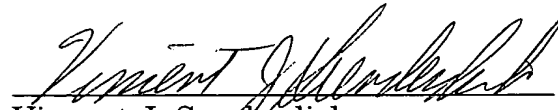
Accordingly, the claims should now be allowed.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #622/43770CO).

Respectfully submitted,

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